

STUDENT

FILING COVER

To Bind Completed Matter



Course given by

New England.
W. H. Welsh

SUBJECT:

For the
NATIONAL SEPARATE-LEAF NOTEBOOK

Patented by E. W. Hill, July 5, 1898.

E 8.35 - 8.45

Soft to barren sand
few sea clam shells
SSW $1\frac{1}{10}$ mile

F Sand to Soft Blue clay
9.05 to 9.10

Sea clam shells few quahog
shells. 1 small quahog live
SW $\frac{1}{2}$ S 3 miles

G 9.30 - 9.35

Soft to hard Blue-green
clay. Dead quahog shells +
sea-clam shells
W S W 2 miles

10377 H. Sta

NE fresh cloudy swell

11.25 Am - 1 Pm,

15 m. ~~HT~~

0

71.5

W.S.

15 m. 148 15.9 @ 20 WS

SE by E $\frac{1}{4}$ E 7.2 miles

* Clam dredge 11.30 - 11.40

1 king crab, 1 sea robin few dead
quohog + sea-clam shells.

Sled net	35 min	very little but stenophore
$\frac{1}{2}$ m net	30 "	& fish eggs
20 net	30 "	few micro

Otter trawl - 20 min

1 *Lophosetta*

Sea robins Rife ♂ IIII Hard ♂ I

" ♀ II

P. dentatus 1 (45 cm) ~~HT~~

Sea clam shells

TT

10708 to

10715

10377 I. 16 m. SE $\frac{1}{4}$ E $\frac{1}{4}$ E
2.08 PM - 15 min 7.2 ~~5~~ miles
Hrd + soft. blue clay + sh
6 Conchs (live) + dead sea clams
1 skate TT 10717

J. Scallop dredge. SE $\frac{1}{4}$ E $\frac{3}{4}$ E 8 miles
2.32 PM. 15 min.
 $\frac{1}{2}$ bush conchs + dead shells
Sea clam

K. 3 PM. 5 min hooked SE $\frac{1}{4}$ E $\frac{3}{4}$ E 5 ~~7~~ miles
up. Dead sea-clam shells $\frac{1}{4}$ bush
Sand. string

L. 3.14 PM 10 min ESE $\frac{3}{4}$ E 4.5 miles
1 bushed sea clam shells
1 quohog shell Several live
conchs.
hard blue clay.

Towers N by W
down NW by W $\frac{1}{2}$ W

N $\frac{1}{2}$ E
W N W.

M. Soft. to hrd.

3.43 Pm 357 15 min

1/2 bush dead sea dawns
+ live conchs. Black mud
ESE 3.8 miles

N. 4.15 Pm Sft.

15 min,

7 conchs + 2 large quohogs.
E by S 2.3 miles

Located trap -
Went into Case

Wm
N 1/2 W
NE 1/4 E 1/2 E
W 1/4 N 1/2 N

Sta 10378 S $1\frac{1}{2}$ E 5 $\frac{3}{10}$ miles Aug 11

NE light clear. Smooth
- Meerap Shroal

9.45 AM - 10.30 AM

O 70 W.S.

R. 148 21.1 @ 22 W.S.

14. m.

10 AM.

Otter trawl $\frac{1}{2}$ hr.

20 net O 20 min fan macro

$\frac{1}{2}$ m net O " Scanty.

Red & gray worm tubes

Sea. robins 23

Puffer 1

Summer flounder 5

Window-pane 1 TT 10718

Spate 1 (Same as Sta 10737)

Wt + length of *P. dentatus*

37 cm 460 g

38 525 g

50 1155 g

41 660 g

34 405 g.

Scaler + data taken

S $\frac{1}{4}$ E 7.2 miles

~~A.~~ 8 fath Soft
15 minutes.

Clam dredge 11.15 AM
dead sea-clam shells
& 1 quohog.

B, 12.30 PM. $\frac{1}{2}$ mi

Otter Trawl. S by E 8.8 miles

75 sea robins [204 TT 10720
204 TT 10721

7 flounders

1 window pane TT 10719

Q. 1:55 P.m.

Sand bottom + gravel

Clam dredge

1 sea clam, 15 min. SSE 8 miles

$\frac{1}{2}$ bush⁹ large sea-clam shells.

The dredge does not dig deep enough to get these sea-clams.

D 3:10 P.m. SE $\frac{3}{4}$ S: 1 $\frac{1}{2}$ miles
Hnd 1

clam dredge

Gravel + pebbles, barren

$$\begin{array}{r} 18. \\ 14 \\ \hline 32 \end{array}$$

Sts 10279 Aug 11

4.00 PM - 6 PM

Calm clear ground swell

27 m.

1 mile S of from S fork lightship

0 74.5 W2

25 *148 11.05 @ 18

Gyrodactylus

Bottom out 1 Alms - *stenophanes*
20 min

1/2 m out 0 Scanty

20 net 0

So all of dredge 25 min down

1 Bush sand dollars, stars
a dead sea urchin shell

~~11 by 5 miles from lightship~~
~~bottom of oil coming to surface~~

13520 May 12 1 30

2.30 AM

Shifting

20 ft from south bank

23 ft = 42 meters

0

74.5

WS

20 148

6.95 @ 19 WS

40 153

6.94 @ 18 WS

1/2 liter

Bottom at 25.0 Put 1/2 of 1/2

1/2 in at 0 Green Trenches

20 at 0 Slanty

$$\begin{array}{r} 11111 \\ 2 \overline{) 22222} \\ \underline{22222} \\ 00000 \end{array}$$

10551 May 12 6:25 AM
8:45 AM

Cloudy W. chills
green rain cloud

38 fath - 5.7 m
much gulfered. Red of stem of flower
not fast

0	94.5	WS.
20	149	17.17 @ 24 WS
40	148	4.5 @ 22 WS
65	153	4.4 @ 21 WS.
34	148	4.4 @ 17

Scallops dredge 15 min.

6 scallops + 1 bad star from gulley
shells.

Red nets Red C. Cal & P. m. m.
Gutter net 25-0 Scanty sea 11 fath.
20 net 0 Scanty
1/2 net 0 many small blue fish

$$\begin{array}{r} 109.7 \\ 10.9 \\ \hline 120.6 \end{array}$$

10382

Aug 12

11.30 am

4.00 pm

New York

Lancaster

Lancaster

66 fath - 120 m.

76°

W S.

40 R 149 7.35 @ 24 W.S.

50 " 148 5.10 @ 23 W.S.

120 " 153 7.05 @ 22

120 m. T. Let Trawl at 12.45 pm

i P.M.

Bottom net 120-0 1/2 m. net

Water net 50-0 1/2 m. net

20 fath 0 1/2 m. net

1/2 m. net 0 1/2 m. net

Other Trawl. Bottom 10 m.

Other haul

1 lobster 3/4 can beer

3 water glasses

if red, 2 1/2 pints

Crab, stars of pines

large salt, + some

small crustaceans

TT 10722 to 10731 in

good tile fish bottom

1 spiny fish

1 silver fish

(most bait taken)

10503 Aug 12

4.45 PM 5.30 PM

W. W. Colver clinic

96 fath = 175 m

0 76.5 125

25	148	13.68 @ 73	
50	153	5.2 @ 71	
100	149	5.7 @ 175	WS
125	148	11.45 @ 16	WS
175	152	9.74 @ 17	WS

Humphreys & White

Pro. Anti.

10384

Aug 12.

6.15 PM - 9 PM
 W N W ^{fully cloudy}
 left ^{clear}

0 76.5 WS

50 149 9.82 @ 25

100 148 10.64 @ 25

150 152 11.3 @ 25

250 149 9.5 @ 20 W2

350 148 6.48 @ 18 WS

500 152 5.03 @ 20 WS

Bottom net 500-0 ^{empty, left}
^{half stuff}

Water net 250-0 ^{2 fish + 1 empty}

20 net 0

1/2 net 0 ^{small stuff}

School of *Parus* & *Parus*

The same way, low



Sunday 5:50 AM
7:45 AM

10000 Aug 13

5:30 AM Sat for 11 miles

77 fath + 1140 - ...
... NW ...

Result Nothing - many birds

1 ft net on surface

Surface temp 71°

Set out traps

Put over other trawl

15 min

(2 filling, for 20 min only)

Physalis + Gulf weed

10326 (quad 1) Aug 13.

No Squally, fresh smooth cloudy

95 fath - 173 m.

Set for trawling 120 P.M.

Squall from North, at 2 P.M.
just got down & had to
cut away bit of trawl.

0	
25	Went down to
50	to make fish & squid.
100	
150	4.00 P.M. wind
175	moderating, got up

Maine. I with one reef

above

10385 Aug 12 4.30 PM

NE Sky rough chop. Cloudy.

● temp. 76.5

34 fath - 62 m.

Water. mat. 45-50 m $\frac{1}{2}$ line

$\frac{1}{2}$ m net 0. 25 min.

Too rough to risk this morning.

Water net - swarm of Clams,
Cuttle + Pods.

$\frac{1}{2}$ m net small B. open for
4 1/2

10387 Aug 21.

12.30 Pm.

Clear smooth W light

Cape Henry Lt Buoy -
(last of alba
13 meters)

O 74 W D.

(40) 1200 145 23.3 @ 24 WS.

20 net O Rich green water

1/2 m net O Scanty

Sled net Bot - O Rich green water
& crustaceans.

Otter trawl, 15 min (slow)

76m water 2 y sea 70m, 1 winter for

Very few theropores

1 small shark seen

Hopman between ~~27 & 28~~
 fisherman with cones
 out for blackfish. No luck
 put over after travel 10 min
 hard bottom

3.10 - 3.20 PM

Aug 21st

Sta 10 ~~308~~

Crackers, mostly 9 with well divided hard rock			
29 m	280 g	27	250
32	400	27	265
30	340	25	195
29	350	27	255
29	220		195
28	290	1 g sample / 1 qt	
28	300	TT 10732	
28	330	Sample 400	
31	445	volume	
27	<u>290</u>		

St 10389 Aug 21

4.15 P.M. - 5.45 P.M.,
15 miles E of Burn

Clear, smooth, light S. breeze
Blue, clear water.

19 m.

0		75	WS.
10	148	23.45	26
18	153	22.40	25.75

1.15
Sled out 1st -> 14.5 min
20 out 0 " fair water
1/2 m out 0 " few sandbars
up & choppy

Other trail 10 min.

5 croakers, same as before

3 sea robins!

not slightly torn!

18.2

7.2

25.4

10390 Aug 21

8.15 Pm. - 9.45 Pm

South, fresh, smooth, clear
40 miles 5 by 2 feet 11 in

26 in.

0 75 WS.

12 148 23.5 @ 24 WS

25 153 16.72 @ 24 WS

8.40 Pm.

Sled net 26-0 1/2 hr. South, fresh, smooth, clear
20 net 0 " fair hard smooth
1/2 m. net 0 " 100 ft. clear

Other trail 10 mi.
2 smooth, 1 deep-fitted.
3 smooth, 1 smooth bottom

$$\begin{array}{r} 31\bar{5} \\ 32\bar{6} \\ \hline 40.1 \end{array}$$

10311 Aug. 22 12.15 AM

1.45 AM

Class fresh 2 hour smooth

sea.

22 fath. 40 m.

Rich young fishes

0

73

WS

20 148 72-10 6-23 WS

40 153 71.09 @ 23 WS

Slide one ^{first} ^{from station} ^{swarm of}
20 net 0 " ^{Scouty}
1/2 net 0 " ^{4 of 8 young}
^{horizontal}

After travel 10 min.

3 large 1 small scatter

1 small *Urophycis* *hyalina*, 10733
few star & sea urchin shells

$$\begin{array}{r} 72 \\ 9 \\ \hline 12 \end{array}$$

Sta 10372

270 Am to 6 Am

40 Cloudy, full moon

40 feet - 82 m.

O		72	WS
20	148	21.95 @ 23	WS
40	149	6.92 @ 23	WS
60	148	6.2 @ 22	WS
80	152	5.44 @ 23	

Full 440 Am

1/2 in. all
Shd not 71-0 m. Salps red water
20 wt 0 very sandy
1/2 in at 0 Salt blue outcrops

After travel
Salps + a few shells

Phylos. *delphin* + *wood*
in *physalia*.

10393 Aug 22

7.30 Am.

W fresh clear. sun. D.
water very blue.

0	72	WS.
50	149	12.09 @ 23 WS
100	148	9.05 @ 23 WS
200	153	11.48 @ 23 WS
300	149	6.59 @ 23 WS
400	148	7.10 @ 21 WS
500	153	5.45 @ 18 WS

net @ 9.05

Bottom net 500-0 1 hr. Scanty
pumped water

Water net 300-0 4 min. 1 large -
self 20

1/2 hr net 0 1/2 hr Scanty

20 net 0 " "

$$\begin{array}{r} 36.5 \\ 5.4 \\ \hline 41.9 \end{array}$$

102711 Aug 26 8 Am.

- 7.50 km

Clear SE, light Breeze

42 m.

0		69.5	WS
20	153	12.52 @ 25	WS
40	148	7.72 @ 24	WS

Net 3 8:20 Am.

Scanty net 4 ft
Side + Pop.

Bottom net 42-0

1/2 m net 0

Scanty net 4 ft

20 net 0

Scanty

Other birds 20 min.

1 Song sparrow		Scatterlings 23
2 American crows		" 15
1 Silver Wren		" 15
1 Bushy Woodpecker		Hermit etc.
44 Larks		

$$\begin{array}{r} 11.5 \\ 11.8 \\ \hline 34.3 \end{array}$$

10395 Aug 26 2 PM

3.4N-PM

Clear S. ~~light~~ ^{light} smooth

38 m.

0, 70 W.S.

17, 148 17.9 @ 24

35, 103 9.14 @ 15

note 2:30 pm.

Bottom net 38-0 1/2 hr
Swarm (1 gal) of pleuroph
cop. Eute. oag. etc

1/2 m net 0 Scanty

20 net 0 "

OTter trawl 20 min ^{TT} (10734 inc
10737)

1 small butterflyfish

2 " limanda a few sand

1 P. oblongus dollars

2 scallops

$$\begin{array}{r} 18.2 \\ 10.9 \\ \hline 29.1 \end{array}$$

10396 Aug 26 10.30 PM
11.45 PM

Clear light S. Smooth sea.

Brilliant aurora
Water fine & brilliant

29 m.

0. 66.5 45
28/ 153. 12.3 @ 20 WS

10.55 PM

Bottom net	20 min	Swarm Sag.
1/2 m	"	4 ft + Euth.
20 m	"	fair haul pods + 4 ft
20 m	"	" " macro

10397 Aug 28

Nantucket Id.

11 AM ^{11:30} SE light

Smooth cloudy.

Surface temp 69 WS.

~~Under net~~ } Surface
~~20 net~~ } 1/2 hr.

Under net 3-0 m. 1/2 hr.

20 net 0 " fair down miss